

STORM WATER
POLLUTION PREVENTION PLAN
FOR
THE MILBANK MANUFACTURING CO. FACILITY
LOCATED AT
KOKOMO, INDIANA

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10324 Briar Creek Place
Carmel, IN 46033

November 12, 1998

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MIL0000361

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1.0 INTRODUCTION

The EPA final regulations promulgated on November 16, 1990 require NPDES permit coverage for certain storm water discharges associated with industrial activity. Industrial facilities subject to the regulation were to submit either individual or group NPDES permit applications, or be part of a general permit program for storm water discharges.

This facility submitted a Notification of Intent (NOI) to participate in the Indiana general permit program. A copy of the NOI is contained in Appendix A.

This facility operates under SIC Code 3499, fabricated metal products. SIC Code 34 falls under federal regulation 40 CFR 122.26(b)(14)(xi) and Indiana rule 327 IAC-15-6-4(2)(J)(vx). Facilities in this classification need to apply for a permit only if storm water is exposed to industrial activities. Storm water is exposed to industrial activities at this site.

Under 327 IAC 15 it is required that a storm water Pollution Prevention Plan (PPP) be developed and certain requirements for the plan are given. This Pollution Prevention Plan has been prepared in accordance with those requirements. This plan has also been prepared in accordance with the applicable requirements in the September, 1992 EPA guidance document "Storm Water Management for Industrial Activities-Developing Pollution Prevention Plans and Best Management Practices".

The check list and worksheets used in developing this Pollution Prevention Plan are contained in Appendix C.

It is also required under 327 IAC 15 that storm water sampling be conducted and certain requirements are given. A Storm Water Sampling Plan has been prepared to meet the requirements of 327 IAC 15 and is contained in Appendix H. This Storm Water Sampling Plan has also been prepared in accordance with the applicable sections of the July, 1992 EPA publication "NPDES Storm Water Sampling Guidance Document".

2.0 POLLUTION PREVENTION TEAM

Worksheet #1 in Appendix C shows the title of the person responsible for the Pollution Prevention Plan. He is:

<u>Name</u>	<u>Office Phone</u>
Roger Glendening	765-452-5694

Roger Glendening will have the primary responsibility for all aspects of the Pollution Prevention Plan. He will delegate responsibility to others as needed.

3.0 EXISTING ENVIRONMENTAL MANAGEMENT PLANS

The facility produces a wastewater treatment sludge that is a special waste. The plant is not a generator of hazardous waste, so a RCRA Contingency Plan is not required. The plant does not have an NPDES permit nor is required to have a SPCC Plan.

4.0 ASSESSMENT

4.1 Site Maps

Appendix B contains the site maps. Figure 1 is a detailed map of the site showing the structures, the storm water collection system, the drainage area, the outfall sampling location, loading and unloading areas, storage areas, and other pertinent information.

Figure 2 is an enlargement of a U.S.G.S. map showing the area within one-quarter mile of the site, including the ground surface contour lines, surface water bodies, and other pertinent features. The center of the site is located at longitude 86°-06'-50" and latitude 40°-28'-54".

For this classification of facility, the only regulated areas are those in which material handling activities are exposed to storm water. The only area that meets this requirement is the shipping and receiving area.

Outfall 001 is the catch basin which is located in the truck well of the shipping/receiving area shown in Figure 1. The catch basin discharges to the city storm sewer system. Storm water from the shipping/receiving area, plus from the nearby building roof, flows through this outfall. This is the location at which storm water sampling will be conducted.

The wastewater treatment sludge is stored in a covered hopper on a concrete pad outside the building at the location shown on Figure 1. Storm water from this area flows by sheet flow off the site into the gutter along the street. Since this is not a point source discharge, this is an unregulated discharge.

The following information describes the site as required under 327 iac-15-6-7(b)(1):

- * The outfall location and the corresponding regulated drainage area is shown in Figure 1.
- * The buildings and paved areas are shown in Figure 1.
- * There are no areas where materials are stored such that they are exposed to storm water are shown in Figure 1.

- * Structural control measures include roofs over areas where some materials are stored and manufacturing operations are conducted.
 - * The materials loading dock location is shown in Figure 1.
 - * There are no permitted hazardous waste treatment, storage, or disposal areas on the site.
 - * There is no underground injection of fluids on the site.
 - * There are no springs or wetlands on the site.
 - * There are no other surface water bodies on the site.
 - * There is no exposed soil on the site in the regulated storm water area, and since the entire area is paved, roofed, graveled, or covered with vegetation, the soil type is not applicable.
 - * There are no existing or proposed underground storage tanks.
 - * There are no specific snow dumping areas at the site. Snow is plowed to the edges of the parking areas and roadways as needed.
 - * The following summarizes the regulated impervious and total areas, in square feet, draining to the outfall:
- | <u>Outfall</u> | <u>Impervious Area</u> | <u>Total Area</u> |
|----------------|------------------------|-------------------|
| 001 | 15,200 | 15,200 |
- * There are no drinking water wells shown on the USGS map within 1\4-mile of the site, nor is it known that there are any.

4.2 Potential Pollutants

4.2.1 Significant Materials

The significant materials used at the site are listed on Worksheet #3 in Appendix C.

4.2.2 Exposed Materials, Storage, Management Practices

There are no exposed materials.

4.3 Significant Spills and Leaks

There were no significant spills or leaks in the last three years.

4.4 Non-Storm Water Discharges

The non-storm water certification is made on Worksheet #5 in Appendix C.

4.5 Existing Sampling Data

The laboratory analytical results from the storm water sampling are contained in Appendix E. A form for use in submitting the results is also enclosed in Appendix E.

4.6 Assessment Survey

There is one potential regulated source of storm water contamination at the site. It is the shipping and receiving dock area. Spills could occur at the loading dock when materials are being unloaded. Spills could flow into the storm water catch basin in the truck well at the dock.

5.0 BMP IDENTIFICATION

5.1 Baseline BMPs

The identification of the Best Management Practices (BMPs) for the site is documented in Worksheet #7a in Appendix C.

5.1.1 Good housekeeping

Keep the areas around the loading dock clear to minimize the potential for spills. Clean up any small spills at the loading dock immediately to minimize the potential for storm water contamination.

5.1.2 Preventive Maintenance

None required.

5.1.3 Inspections

Inspect the loading dock area on a regular basis for any potential sources of storm water contamination.

5.1.4 Spill Prevention Response

Spill containment and cleanup materials are on hand at the loading dock to contain and clean up spills. A pad is also located at the dock to place over the catch basin to minimize the amount of spilled material entering the catch basin.

5.1.5 Sediment and Erosion Control

None required.

5.1.6 Management of Runoff.

None required

5.2 Advanced BMPs

None required

5.3 Implementation Schedule

The basic components of the implementation schedule are shown on Worksheet #8 in Appendix C.

5.3.1 Good Housekeeping

Only minor corrective actions are needed in improving the good housekeeping practices around the loading dock. Employees will be informed of the increased requirements by December 1, 1998.

5.3.2 Preventive Maintenance

None required

5.3.3 Inspections

Inspection of the shipping and receiving area will be started by December 1, 1998.

5.3.4 Spill Prevention and Response

The spill control and cleanup materials and the catch basin cover pad will be in place by January 1, 1999.

Once the Storm Water Pollution Prevention Plan has been fully implemented, IDEM should be notified. A form that can be used for the certification is contained in Appendix D.

6.0 SPILL PREVENTION AND RESPONSE

After all corrective actions are taken as specified in this Storm Water Pollution Prevention Plan, there will still be one area where spills could potentially occur, causing storm water contamination. The area is the shipping and receiving area. If spills occur during unloading of materials at the loading dock, they could fall into the truck well and either flow, or be carried by storm water, into the catch basin in the truck well.

The shipping and receiving area will be kept orderly and uncluttered to minimize the potential for spills. Spill control and cleanup materials are located in the shipping and receiving area so that spills can be rapidly contained and cleaned up.

A drain cover pad is available to place over the catch basin in the truck well, to minimize any spills from entering the catch basin.

A periodic inspection will be made of the shipping and receiving area. It will be inspected for conditions that might contribute to spills and to make sure that any small spills have been properly cleaned up. The spill control and cleanup materials and equipment will be inspected to make sure it is in the proper location, there is an adequate supply, and that it is in good condition.

When a spill occurs, the staff will take immediate action to contain it and begin cleaning it up. If materials might get into the catch basin in the truck well, the pad will immediately be placed over the catch basin. If a liquid is spilled, it will be cleaned up with the absorptive materials. The contaminated absorptive materials will be placed in a suitable container and disposed of in a proper manner.

As soon as possible, the spill will be reported to management. The report will be made to the first person listed below, and if they are not available, to the next persons on the list in order, until at least one person on the list has been personally informed:

<u>Person</u>	<u>Home Phone</u>	<u>Office phone</u>
Richard Tyler	219-626-2397	765-452-5694
Roger Glendening	765-455-2901	765-452-5694

Upon receipt of a report of a spill , management will collect pertinent information pertaining to the spill including the following:

- * Time of spill
- * Material
- * Quantity
- * Actions taken
- * Did any materials enter the storm sewer system
- * Is it under control, any danger of additional spillage?

The management shall determine if further reporting is required. In general, if the spilled materials are contained and cleaned up, and do not enter the storm water drainage system, further reporting is not required.

If materials do enter the storm water drainage system then it should be reported to the commissioner, at 232-8162, as soon as

possible. In addition, if the material is hazardous, and the amount of the spill is above the reportable quantity, it may be necessary to report the spill to the National Response Center at 1-800-424-8802 and to IDEM at 317-233-7745.

7.0 EMPLOYEE TRAINING

Worksheet # 9 in Appendix C outlines the training program for spill prevention and response, good house keeping, and material management practices. A brief summary of the training program is given below:

Who: Maintenance Personnel
Shipping & Receiving Personnel
Fork- Lift Operators

When: First training will be held in November, 1998. Additional training will be conducted as needed for present staff. Training for new staff will be conducted as soon as possible after hiring.

Employee Training Topics:

Good Housekeeping

- * Review housekeeping requirements in this plan.
- * Review clean up areas.
- * Review proper waste disposal locations.
- * Review locations of cleanup supplies.

Spill Prevention and Response:

- * Review requirement for immediate cleanup of spills at loading dock.
- * Review location of spill control materials.
- * Demonstrate use of spill control materials.
- * Review spill reporting requirements.

Materials Handling & Storage:

- * Review MSDs of materials used on site and make sure personnel are aware of precautions needed when using the materials or cleaning up spills.
- * Familiarize employees with the materials, and where they are used and stored.

- * Incorporate other aspects of the Hazard Communication training program.

8.0 ANNUAL SITE COMPLIANCE EVALUATION

Annually an evaluation will be conducted to determine if the requirements of the Pollution Prevention Plan have been followed and if it has been effective. The evaluation will consist of the following activities:

- * Inspect the storm water catch basin in the truck well for any evidence of pollutants.
- * Observe potential spill areas at the loading dock for any evidence that BMPs are not being followed.
- * Inspect spill control and cleanup materials to verify that they are in their proper place, there is an adequate quantity, and that they are in good condition.
- * Note any revisions needed to this Pollution Prevention Plan, make revisions to the Plan, and implement any needed changes.
- * Prepare an inspection summary report.
- * Document all incidents of non-compliance.

This report need not be submitted to IDEM. It should be placed in Appendix G of this plan as a record.

9.0 STORM WATER SAMPLING

To meet the requirements of 327 IAC 15-6-7(d),(e) and (f) a Storm Water Sampling Plan was prepared and is contained in Appendix H. The first round of storm water sampling should be conducted before full implementation of this plan. Then during the second year, two additional rounds of storm water sampling should be conducted. The sampling analysis results should be reported to the Indiana Department of Environmental Management (IDEM) by January 28th of the year following the collection of the samples.

During the second, third, and fourth years after implementation of the Pollution Prevention Plan, visual inspections of each outfall must be performed. The inspections must be performed twice each year during a storm event with the results reported annually to the permits section by January 28th of the following year. The two storm events should be at least three months apart and be preceded by at least three days with less than 0.1 inches of rainfall. Visual inspections shall be made for the presence of turbidity, color, foam, solids, floatables, and an oil sheen.

Appendix F contains a worksheet that may be used for this inspection.

10.0 CERTIFICATION

This Pollution Prevention Plan was prepared using available public information, information obtained by my own inspection and inquiry, and information supplied to me by Milbank Manufacturing Co. To the best of my knowledge this information is true, accurate, and complete.

I certify that this plan incorporates good engineering practices and to the best of my knowledge meets the requirements of 327 IAC 15-6-7(a)-(c).

John W. Bloemer
Signature

11/12/78
Date

John W. Bloemer, P.E.CHMM
P.E. Registration No. 60890090, Indiana

APPENDIXES

APPENDIX A - NOTIFICATION OF INTENT

November 19, 1998

Indiana Department of Environmental Management
Office of Water Management
Permits Section, Storm Water Desk
105 S. Meridian Street
P. O. Box 6015
Indianapolis, IN 46206-6015

Ladies or Gentlemen:

This is our Notification of Intent to participate in the Indiana general storm water discharge permit program.

This facility complies with the applicability requirements of the general permit rule since it has a point source discharge of storm water and is not prohibited by any provisions of 327 IAC 15.

Below is listed the information requested for the Notification of Intent as specified in your May 29, 1993, letter to storm water applicants. We have numbered the information items with the same numbers used in your May 28th letter.

- 1) Facility mailing address:
Mr. Roger Glendening
Milbank Manufacturing Co., Inc.
P. O. Box 754, 1400 E. Havens
Kokomo, IN 46903-0754
Telephone: 765-452-8361
- 2) SIC Code: 3499, fabricated metal products
- 3) Owner mailing address:
Milbank Manufacturing Co., Inc.
P. O. Box 754, 1400 E. Havens
Kokomo, IN 46903-0754
Telephone: 765-452-8361
Status: Private
- 4) Longitude: 86° - 06' - 50"
Latitude: 40° - 28' - 54"
- 5) The facility discharges storm water into the city of Kokomo storm water collection system that discharges into the Prairie Creek Ditch.

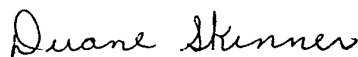
Indiana Department of Environmental Management
Office of Water Management
Permits Section, Storm Water Desk
November 19, 1998
Page Two

- 6) There is one regulated point source discharge, designated Outfall 001. Outfall 001 is a catch basin in the shipping and receiving truck well on the south side of the building. Industrial activity associated with Outfall 001 includes loading and unloading materials.
- 7) There are no essentially similar outfalls.
- 8) The name of the responsible corporate officer is Duane Skinner, Vice President of Production.
- 9) I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
- 10) This letter is signed and dated by the person identified in item #8 of this notice.
- 11) Enclosed is the required \$50 application fee.
- 12) The receiving stream, Prairie Creek Ditch, is not an outstanding state resource water or an exceptional use stream.

If you have any questions concerning this notice, please contact Mr. Roger Glendening at 765-452-8361.

Sincerely,

MILBANK MANUFACTURING CO., INC.



Duane Skinner
Vice President - Production

DS:jmr
enclosure

MIL0000375

4532

MILBANK-MANUFACTURING CO., INC.

REL 765 452-5694
11400 E. HAVENS ST., BOX 754
KOKOMO, IN 46903-0754

1-800-368-1323/749

DATE 7-10-30, 98

PAY TO THE ORDER OF LDEN

5000

1950-51

DOLLARS

MILBANK MANUFACTURING CO., INC.

First National
in a HASTEN RANCHSHARES BANK

Maar E. Whitbread

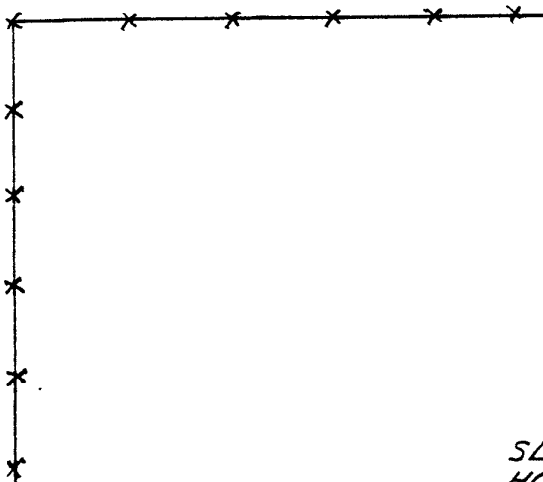
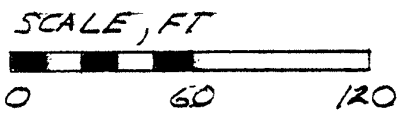
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APPENDIX B - SITE MAPS



PROPERTY LINE



SL
HC

E MAP

HAVENS STREET

ED BY:

DRAWN BY *JWB*

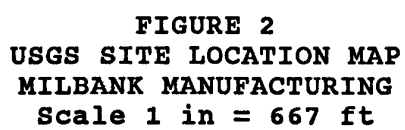
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INK MANUFACTURING
MO, INDIANA

ITAL ENGINEERING
PLACE, CARMEL, IN 46033

DRAWING NUMBER

1



APPENDIX C - WORKSHEETS

POLLUTION PREVENTION PLAN CHECKLIST
J.W. (Bill) Bloemer, P.E., CHMM

PLANNING

- 1) Team members (Worksheet #1) ✓
- 2) Areas of responsibilities *All areas*
 - a) Initial site assessment
 - b) Identification of pollutant sources and risks
 - c) Decision on appropriate BMPs
 - d) Implementation of BMPs
 - e) Plan effectiveness evaluation
- 3) Existing environmental management plans
 - 1) RCRA 40 CFR 264 or 265 *NO*
 - 2) SPCC 40 CFR 112 *NO*
 - 3) NPDES 40 CFR 413, 433, or 469 *NO*
 - 4) OSHA 29 CFR 1910

ASSESSMENT

- 1) Site drawing and potential pollutant sources (Worksheet #2) ✓
 - a) Outline of drainage area, outfalls and associated drainage areas ✓
 - b) Location of existing structural control measures ✓
 - c) Surface water bodies *NA*
 - d) Locations of significant exposure to precipitation ✓
 - e) Locations of previous spills or leaks *NA*
 - f) Locations of fueling stations, maintenance and cleaning areas, loading and unloading, TSD, liquid storage tanks, processing areas, storage areas ✓

- 2) Types of pollutants and flow directions
 - a) Inventory of exposed materials *None*
 - 1) Significant materials for last three years (Worksheet #3)
 - 2) Methods and locations of storage
 - 3) Materials management practices
 - 4) Existing structural controls
 - 5) Treatment
 - b) Identify past spills and leaks (Worksheet #4) *None*
 - c) Identify non-storm water discharges (Worksheet #5) *None*
 - d) Existing sampling data *not yet*
 - e) Risk identification and summary (Worksheet #7) ✓

BMP IDENTIFICATION

- 1) Baseline BMPs (Worksheet #7a)
 - a) Good housekeeping ✓
 - b) Preventive maintenance *NA*
 - c) Visual inspections ✓
 - d) Spill prevention and response ✓
 - e) Sediment and erosion control *NA*
 - f) Management of runoff *NA*
 - g) Employee training ✓
 - h) Recordkeeping
- 2) Advanced BMPs *NA*

IMPLEMENTATION

- 1) Schedule for implementation (Worksheet #8) ✓
- 2) Assign responsibilities ✓
- 3) Progress reports

EMPLOYEE TRAINING (Worksheet #9)

- 1) Spill prevention and response ✓
- 2) Good housekeeping ✓
- 3) Material management practices ✓
- 4) SARA 313 reporting NA

ANNUAL SITE COMPLIANCE EVALUATION

- 1) Inspect drainage areas for evidence of pollutants ✓
- 2) Evaluate effectiveness of pollutant reduction measures ✓
- 3) Observe structural, sediment control, and BMP measures ✓
- 4) Inspect equipment ✓
- 5) Revise plan as needed ✓
- 6) Implement needed changes ✓
- 7) Prepare inspection summary report ✓
- 8) Document all incidents of non-compliance ✓

MUNICIPAL STORM SEWER DISCHARGE

Needs to be done

Must notify sewer authority

SARA 313 FACILITIES-SPECIAL REQUIREMENTS

NA

- 1) provide containment, drainage control, diversionary structures
- 2) Prevent discharges from all areas
- 3) Prevent discharges from liquid storage areas
- 4) Prevent discharges from loading/unloading areas
- 5) Prevent discharges from handling/processing/transferring areas
- 6) Introduce facility security programs to prevent spills

ACTIVITY SPECIFIC SOURCE CONTROL BMPs

- 1) Fueling
- 2) Maintaining vehicles and equipment

- 3) Painting vehicles and equipment
- 4) Washing vehicles and equipment
- 5) Loading and unloading materials ✓
- 6) Liquid storage in above-ground tanks
- 7) Industrial waste management and outside manufacturing
- 8) Outside storage of raw materials, by-products, products
- 9) salt storage

pppct

POLLUTION PREVENTION TEAM
(Section 2.1.1)

MEMBER ROSTER

Worksheet #1

Completed by: J.W. Blomman

Title: Consultant

Date: 10/27/88

Leader: Roger Glandon

Title: Prod. Mgr. / Superintendent

Office Phone: 765-452-5694

Responsibilities: All areas of plant, May delegate as needed.

Members:

(1) _____

Title: _____

Office Phone: _____

Responsibilities: _____

(2) _____

Title: _____

Office Phone: _____

Responsibilities: _____

(3) _____

Title: _____

Office Phone: _____

Responsibilities: _____

(4) _____

Title: _____

Office Phone: _____

Responsibilities: _____

DEVELOPING A SITE MAP
(Section 2.2.1)

Worksheet #2

Completed by: J. W. Alcomer

Title: Consultant

Date: 10/27/98

Instructions: Draw a map of your site including a footprint of all buildings, structures, paved areas, and parking lots. The information below describes additional elements required by EPA's General Permit (see example maps in Figures 2.3 and 2.4).

EPA's General Permit requires that you indicate the following features on your site map:

- All outfalls and storm water discharges ✓
- Drainage areas of each storm water outfall ✓
- Structural storm water pollution control measures, such as: ✓
 - Flow diversion structures NA
 - Retention/detention ponds
 - Vegetative swales
 - Sediment traps
- Name of receiving waters (or if through a Municipal Separate Storm Sewer System) Munc. Sew.
- Locations of exposed significant materials (see Section 2.2.2) ✓ NA
- Locations of past spills and leaks (see Section 2.2.3) ✓ NA
- Locations of high-risk, waste-generating areas and activities common on industrial sites such as:
 - Fueling stations
 - Vehicle/equipment washing and maintenance areas
 - Area for unloading/loading materials ✓
 - Above-ground tanks for liquid storage
 - Industrial waste management areas (landfills, waste piles, treatment plants, disposal areas)
 - Outside storage areas for raw materials, by-products, and finished products
 - Outside manufacturing areas
 - Other areas of concern (specify: _____)

MATERIAL INVENTORY
(Section 2.2.2)

Worksheet #3

Completed by: J.W. Bloemen

Title: Consultant

Date: 4/7/78

Instructions: List all materials used, stored, or produced onsite. Assess and evaluate these materials for their potential to contribute pollutants to storm water runoff. Also complete Worksheet 3A if the material has been exposed during the last three years.

Material	Purpose/Location	Quantity (units) / year			Quantity Exposed in Last 3 Years	Likelihood of contact with storm water. If yes, describe reason.	Past Significant Spill or Leak	
		Used	Produced	Stored			Yes	No
Steel	product / inside	6 x 6 3s			None	NO		✓
Secure Low Foam	production / inside	17,000 lbs			"	"		✓
Liquid Ferro Tens	production / inside	17,000 lbs			"	"		✓
Caustic Soda	WWT / inside	13,000 lbs			"	"		✓
Ferric chloride	WWT / inside	14,000 lbs			"	"		✓
Calcium chloride	WWT / inside	20,000 lbs			"	"		✓
Sulfuric acid	WWT / inside	2,000 lbs			"	"		✓
Flocculant	WWT / inside	4,000 lbs			"	"		✓

DESCRIPTION OF EXPOSED SIGNIFICANT MATERIAL (Section 2.2.2)

Worksheet #3A

Completed by: J.W. Bloomer

Title: Consultant

Date: 10/27/78

Instructions: Based on your material inventory, describe the significant materials that were exposed to storm water during the past three years and/or are currently exposed. For the definition of "significant materials" see Appendix B of the manual.

[illegible]

LIST OF SIGNIFICANT SPILLS AND LEAKS
(Section 2.2.3)

Worksheet #4

Completed by: J.W. Bloemer

Title: Consultant

Date: 10/27/98

Directions: Record below all significant spills and significant leaks of toxic or hazardous pollutants that have occurred at the facility in the three years prior to the effective date of the permit.

Definitions: Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

1st Year Prior										
Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, If Known	Reason	Amount of Material Recovered	Material No Longer Exposed to Storm Water (True/False)	
<u>None</u>										

2nd Year Prior										
Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, If Known	Reason	Amount of Material Recovered	Material No Longer Exposed to Storm Water (True/False)	
<u>None</u>										

3rd Year Prior										
Date (month/day/year)	Spill	Leak	Location (as indicated on site map)	Description				Response Procedure		Preventive Measures Taken
				Type of Material	Quantity	Source, If Known	Reason	Amount of Material Recovered	Material No Longer Exposed to Storm Water (True/False)	
<u>None</u>										

CHECKLIST FOR CONDUCTING DRY WEATHER EVALUATIONS

1. Date of inspection: 10/14/98
2. Facility name and address: Milbank Mfg.
Kokomo, IN
3. Date of last rain event: 73 days
4. Inspector name: J.W. Bloemer
5. Type of outfall
☐ Concrete ☐ Pipe ☐ Grassed ☐ Rock ☒ Other catch basin

6. Is there visible flow from the pipe? ☐ Yes ☒ No
 If yes, check all that apply. If no, go to number 7.

<input type="checkbox"/> Colored water (describe) _____	<input type="checkbox"/> Oily sheen
<input type="checkbox"/> Odor* (describe) _____	<input type="checkbox"/> Sludge present
<input type="checkbox"/> Murky	<input type="checkbox"/> Clear water
<input type="checkbox"/> Floating objects (describe) _____	<input type="checkbox"/> Stains on conveyance
<input type="checkbox"/> Absence of plant life surrounding conveyance	<input type="checkbox"/> Notable difference in plant life surrounding conveyance
<input type="checkbox"/> Scum	<input type="checkbox"/> Suds <input type="checkbox"/> Other: _____

*e.g., rotten eggs, earthy, chemical, chlorine, soap, putrescence, gasoline, musty, etc.

Estimate the flow either visually or by describing the width, height, and shape of the conveyance and the approximate percentage of the conveyance where flow is present or the approximate depth of the flow. Describe your estimate.

7. Is there standing water present? ☐ Yes ☒ No
 If yes, check all that apply. If no, go to number 8.

<input type="checkbox"/> Colored water (describe) _____	<input type="checkbox"/> Oily sheen
<input type="checkbox"/> Odor* (describe) _____	<input type="checkbox"/> Sludge present
<input type="checkbox"/> Murky	<input type="checkbox"/> Clear water
<input type="checkbox"/> Floating objects (describe) _____	<input type="checkbox"/> Stains on conveyance
<input type="checkbox"/> Absence of plant life surrounding conveyance	<input type="checkbox"/> Notable difference in plant life surrounding conveyance
<input type="checkbox"/> Suds	<input type="checkbox"/> Scum <input type="checkbox"/> Other: _____
<input type="checkbox"/> Absence of plant life surrounding conveyance	

*e.g., rotten eggs, earthy, chemical, chlorine, soap, putrescence, gasoline, musty, etc.

8. From the inspection locations, can you see any unusual piping or ditches that drain to the storm water conveyance? ☐ Yes ☒ No
9. Is there any overland flow visible from the discharge location? ☐ Yes ☒ No
10. Are there dead animals present? ☐ Yes ☒ No

Signature: J.W. Bloemer

NON-STORM WATER DISCHARGE ASSESSMENT AND CERTIFICATION (Section 2.2.4)			Worksheet #5 Completed by: <u>J.W. Bloomer</u> Title: <u>Consultant</u> Date: <u>10/27/98</u>		
Date of Test or Evaluation	Outfall Directly Observed During the Test (identify as indicated on the site map)	Method Used to Test or Evaluate Discharge	Describe Results from Test for the Presence of Non-Storm Water Discharge	Identify Potential Significant Sources	Name of Person Who Conducted the Test or Evaluation
10/14/98	001	Visual	No non-storm discharge	None	J.W. Bloomer

CERTIFICATION

I, _____ (responsible corporate official), certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (type or print) <u>Duane Skinner Vice President Manufacturing</u>	B. Area Code and Telephone No. <u>816-483-5314</u>
C. Signature <u>Duane Skinner</u>	D. Date Signed <u>12-3-98</u>

**NON-STORM WATER DISCHARGE ASSESSMENT AND
FAILURE TO CERTIFY NOTIFICATION
(Section 2.2.4)**

Worksheet #6

Completed by: _____

Title: _____

Date: _____

Directions: If you cannot feasibly test or evaluate an outfall due to one of the following reasons, fill in the table below with the appropriate information and sign this form to certify the accuracy of the included information.

List all outfalls not tested or evaluated, describe any potential sources of non-storm water pollution from listed outfalls, and state the reason(s) why certification is not possible. Use the key from your site map to identify each outfall.

Important Notice: A copy of this notification must be signed and submitted to the Director within 180 days of the effective date of this permit.

Identify Outfall Not Tested/Evaluated	Description of Why Certification Is Infeasible	Description of Potential Sources of Non-Storm Water Pollution
	NA	

CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations, and that such notification has been made to the Director within 180 days of _____ (date permit was issued), the effective date of this permit.

A. Name & Official Title (type or print)

B. Area Code and Telephone No.

C. Signature

D. Date Signed

POLLUTANT SOURCE IDENTIFICATION
(Section 2.2.6)

Worksheet #7

Completed by: J.W. Bloomer

Title: Consultant

Date: 10/27/98

Instructions: List all identified storm water pollutant sources and describe existing management practices that address those sources. In the third column, list BMP options that can be incorporated into the plan to address remaining sources of pollutants.

Storm Water Pollutant Sources	Existing Management Practices	Description of New BMP Options
1. Shipping & receiving area	Clean up spills	Place spill control & cleanup materials at dock
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

BMP IDENTIFICATION
(Section 2.3.1)

Worksheet #7a

Completed by: J.W. Bloemer

Title: Consultant

Date: 10/27/98

Instructions: Describe the Best Management Practices that you have selected to include in your plan. For each of the baseline BMPs, describe actions that will be incorporated into facility operations. Also describe any additional BMPs (activity-specific (Chapter 3) and site-specific BMPs (Chapter 4)) that you have selected. Attach additional sheets if necessary.

BMPs	Brief Description of Activities
Good Housekeeping	Clean up spills and keep area clear
Preventive Maintenance	None
Inspections	Inspect dock area
Spill Prevention Response	Place spill control & cleanup materials at dock
Sediment and Erosion Control	None
Management of Runoff	None
Additional BMPs (Activity-specific and Site-specific)	None

IMPLEMENTATION
(Section 2.4.1)

Worksheet #8

Completed by: J.W. Bloemer

Title: Consultant

Date: 10/27/98

Instructions: Develop a schedule for implementing each BMP. Provide a brief description of each BMP, the steps necessary to implement the BMP (i.e., any construction or design), the schedule for completing those steps (list dates) and the person(s) responsible for implementation.

BMPs	Description of Action(s) Required for Implementation	Scheduled Completion Date(s) for Req'd. Action	Person Responsible for Action	Notes
Good Housekeeping	1. <u>Increased requirements</u>	<u>12/1/98</u>	<u>Glendonning</u>	
	2.			
	3.			
Preventive Maintenance	1. <u>None</u>			
	2.			
	3.			
Inspections	1. <u>Inspect dock area</u>	<u>12/1/98</u>	<u>"</u>	
	2.			
	3.			
Spill Prevention and Response	1. <u>Place materials</u>	<u>1/1/99</u>	<u>"</u>	
	2.			
	3.			
Sediment and Erosion Control	1. <u>None</u>			
	2.			
	3.			
Management of Runoff	1. <u>None</u>			
	2.			
	3.			
Additional BMPs (Actively-specific and site-specific)	1. <u>None</u>			
	2.			
	3.			

EMPLOYEE TRAINING
(Section 2.4.2)

Worksheet #9

Completed by: J.W. Bloemer

Title: Consultant

Date: 10/27/98

Instructions: Describe the employee training program for your facility below. The program should, at a minimum, address spill prevention and response, good housekeeping, and material management practices. Provide a schedule for the training program and list the employees who attend training sessions.

Training Topics	Brief Description of Training Program/Materials (e.g., film, newsletter course)	Schedule for Training (list dates)	Attendees
Spill Prevention and Response	location of materials. demonstrate materials spill reporting	Nov, 98	Maintenance, Shipping & receiving Fork lift operators
Good Housekeeping	Clean up spills Keep area clear	"	"
Material Management Practices	Review MSDSs	"	"
Other Topics			

APPENDIX D - PPP CERTIFICATION

STORM WATER POLLUTION PREVENTION PLAN CERTIFICATION

Please complete the following notification that your facility has completed and fully implemented a Storm Water Pollution Prevention Plan in compliance with 327 IAC 15-6-7. Return this certification to this office as the final quarterly report when the Plan has been fully implemented.

Facility Name: _____

Permit I. D. No. **INR00**__ __ __ __

I hereby notify the Pretreatment and Urban Wet Weather Section that the Storm Water Pollution Prevention Plan (SWPPP) for the above referenced facility has been completed and implemented in accordance with 327 IAC 15-6-7.

" I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of the fine and imprisonment for knowing violations."

Responsible Corporate Officer :

(Printed Name)

(Signature)

Date Signed _____

Date Plan Implemented:

(Mo/Day/Yr)

Rev. 12/16/97

MIL0000399

APPENDIX E- SAMPLING RESULTS

STORM WATER SAMPLING RESULTS

The following is a template that may be used when sending in sampling data in accordance with 327 IAC 15-6 Storm Water Discharges Associated with Industrial Activity. Please use this template or a similar form with all data submitted to this office. Remember to make as many copies of this template as you will need. At this time, this is a sample data form, therefore if you have ideas or comments about improvements that could be made, please send them to Ms. Lori Gates at the IDEM address or email your comments to lgates@dem.state.in.us. **If you choose not to use this template, please make sure all the information included on this template is included with the form you do send in.**

Facility Name: _____

Permit I.D. No. **INR00** _ _ _ _

Sampling Event No. Event 1 Event 2 Event 3 Other
(circle one)

Storm Event Information

Date of Storm Event: _____
(Mo/Day/Yr)

Time Sampled: _____

Duration of Storm: _____
(in minutes)

Total Rainfall
During Storm Event: _____
(in inches)

Number of Hours Between Start of Storm
Measured and End of Previous Measurable
Rain Event: _____

Maximum Flow Rate During Event: _____

Total Flow From Rain Event: _____

Form of Precipitation: _____
(rainfall/snowmelt)

Please attach all records and information resulting from the monitoring activities required under this rule, including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation.

Sampling Results:

Outfall No. _____

Grab or Composite

Parameter	Result (mg/l)	Test Date	Detection Limit	Analyst	Methods
Oil & Grease					
CBOD (5)					
COD					
TSS					
TKN					
T. Phosphorous					
pH					
Nitrate plus nitrite nitrogen					

Sampling Results: Outfall No. _____ Grab or Composite

Parameter	Result (mg/l)	Test Date	Detection Limit	Analyst	Methods
-----------	------------------	--------------	--------------------	---------	---------

Oil & Grease					
CBOD (5)					
COD					
TSS					
TKN					
T. Phosphorous					
pH					
Nitrate plus nitrite nitrogen					

Laboratory Information

Name of Laboratory:

Address:

Phone:

Contact Person:

Please use the space below to explain any of the following:

1. Why all the parameters were not sampled.
2. Why all the outfalls the Notice of Intent letter stated would be sampled were not sampled.
3. Why a composite sample was provided but not a grab sample.
4. Why a grab sample was provided but not a composite sample.
5. Other

" I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of the fine and imprisonment for knowing violations."

Responsible Corporate Officer:

(Printed Name)

(Date Signed)

(Signature)

APPENDIX F - VISUAL INSPECTION CHECKLIST

VISUAL INSPECTION CHECKLIST

Visual inspections of each outfall or representative outfall are required for **two** storm events each year during the **Third Year** of regulation and beyond. It is recommended the outfall be observed approximately 30 minutes after storm water begins to discharge through the outfall and there be a minimum of three months between biannual visual inspections.

Permit Number: **INR00** _____ Facility Name: _____

Outfall Inspected: # _____ Facility City: _____

Date of Inspection: _____

RECOMMENDED ACCEPTABLE STORM CHECK: (circle one)

Did the previous storm of 0.1 inches or more end at least 72 hours ago? **YES** **NO**

Was the rainfall amount of this storm greater than 0.1 inches? **YES** **NO**

VISUAL INSPECTION OBSERVATIONS:

Turbidity present (cloudy appearance)? **YES** **NO**

— (Turbidity is a cloudy condition caused by suspended silt or organic matter)

If yes, what circumstances may have caused turbidity in the storm water discharge? _____

Color: Does the discharge appear clear or colored? **CLEAR** **COLORED**

If colored, describe the observed color: _____

What circumstances may have caused color to be in the storm water discharge? _____

Foam present? **YES** **NO**

If yes, what circumstances may have caused foam to be in the storm water discharge? _____

(PLEASE COMPLETE THE BACK OF THE PAGE ALSO)

Solid material present? YES NO

If solid material was observed describe appearance and possible source: _____

Floatable material present? YES NO

If floatable material was observed describe appearance and possible source: _____

Oil Sheen present? YES NO

If yes, what circumstances may have caused an oil sheen to be present in the storm water discharge? _____

General comments on the storm water discharge: _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of responsible corporate officer or duly authorized representative under 327 IAC 15-4-3(g):

Signature: _____ Date: _____

(PLEASE MAKE COPIES OF THIS CHECKLIST FOR FUTURE USE.)

4/7/98

MIL0000407

APPENDIX G - ANNUAL SITE COMPLIANCE EVALUATION

APPENDIX H - STORM WATER SAMPLING PLAN

STORM WATER SAMPLING PLAN
FOR
THE MILBANK MANUFACTURING CO. FACILITY
LOCATED AT
KOKOMO, INDIANA

Prepared By
J.W. Bloemer, P.E., CHMM
JWB Environmental Engineering
10324 Briar Creek Place
Carmel, Indiana 46033

November 12, 1998

respml

MIL0000410

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1.0 INTRODUCTION

This plan describes the procedures to be employed to collect representative storm water run-off samples from the Milbank Manufacturing Co. facility in Kokomo, Indiana. The procedures described herein are in accordance with 327 IAC 15-6-7-(d) and (e) and applicable sections of the July 1992 EPA publication "NPDES Storm Water Sampling Guidance Document".

Storm water samples must be collected and analyzed once during the first year after submission of the Notification of Intent (NOI) to participate in the general storm water discharge permit program. This first sampling event must be conducted prior to implementation of the Pollution Prevention Plan.

Then, during the second year, two additional rounds of storm water sampling must be conducted. The two additional sampling rounds must be conducted at least three months apart.

2.0 OUTFALL DESCRIPTIONS

The sampling location is at Outfall 001 which is the catch basin located in the truck well on the south side of the building. This catch basin discharges to the city storm sewer system.

3.0 REPRESENTATIVE STORM EVENT

Storm water sampling should be conducted during a precipitation event that is representative for the facility's location. The variance in the duration and total rainfall of the event shall not exceed that of the average or median precipitation event for the area by more than 50 percent. Storm event statistics for the Indianapolis airport, which is approximately 50 miles away, were obtained from Table 5 of the November, 1989 EPA document "Analysis of Storm Event Characteristics for Selected Rainfall Gages throughout the United States". The average values for Indianapolis shown in Table 5 are 0.56 inches total rainfall and 9.7 hours in duration. Thus, the acceptable range for the sampling events at this site are:

Storm Duration = 4.85 to 14.6 hours

Rainfall = 0.28 to 0.84 inches

Also, the rainfall event must be preceded by a period of at least 72 hours with no measurable (less than 0.1 inch) rainfall.

4.0 ANALYTICAL PARAMETERS

Storm water samples collected will be analyzed for the parameters specified in 327 IAC 15-6-7(d). They are:

- * Conventional Storm Water Pollutants.
- * Pollutants regulated under a federal categorical effluent guideline for facilities subject to the guideline.
- * SARA 313 water priority chemicals for facilities subject to the SARA 313 reporting requirements, which can reasonably be expected to be in the discharge.
- * Pollutants listed in an NPDES permit for the site.

All analyses are to be conducted in accordance with 40 CFR 136.

The facility is not subject to the SARA 313 reporting requirements. It does not have an NPDES permit. The facility is subject to a federal categorical effluent guideline as a metal finisher. However, none of the chemicals regulated under the guideline would be expected to be in the storm water.

The parameters to be analyzed for are given below:

<u>Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Oil and grease	mg/l	grab
CBOD ₅	mg/l	grab and composite
COD	mg/l	grab and composite
TSS	mg/l	grab and composite
TKN	mg/l	grab and composite
Total Phosphorus	mg/l	grab and composite
Ph	S.U.	grab
Nitrate plus Nitrite Nitrogen	mg/l	grab and composite

Information concerning the required container types, preservatives, and maximum holding times for each parameter is contained in Attachment B. The required sample volumes should be obtained from the laboratory, since they may vary between labs.

5.0 SAMPLING EQUIPMENT AND PROCEDURES

A combination of grab and time-weighted composite sampling techniques will be employed to characterize storm water discharge quality. Grab samples of the "first flush" run-off will be collected within the first 30 minutes of the discharge from the

precipitation event. The time-weighted composite samples will be obtained using a combination of grab and composite sample techniques. Individual grab samples will be collected approximately every 20 minutes over a 3-hour period. Then, a time-proportioned composite sample will be prepared from the individual grab samples by the analytical laboratory.

The field technicians conducting the sampling should be trained in the sampling techniques and should be familiar with these procedures in advance of the selected storm event. The sampling will occur during the first three hours of the precipitation event. Additional time will be required to prepare the composite sample worksheet, to prepare the samples for transport to the laboratory, and to complete the required sample documentation (Chain-of-Custody record). The specific procedures to be employed during this sampling program are described in the following pages of this plan.

5.1 Sampling Equipment

Sampling Equipment and supplies required for the storm water sampling program include:

- * One set of first flush grab sample bottles with preservatives (from lab).
- * One set of composite sample bottles with preservatives (from lab).
- * One dipper type sampler.
- * One sample cooler with cold packs.
- * One squirt bottle with distilled water (for rinsing).
- * Alconox (non-phosphate soap) and Two 1-gallon containers of distilled water.
- * Rain gauge.
- * Field log sheets, notebook, sample labels, and sample markers.
- * Personal protective equipment (latex or rubber gloves).
- * Flashlight and rain gear.

5.2 Sampling Procedures

1. Assemble sampling equipment and supplies listed above. Ensure that all sampling equipment is clean and that preservatives have been added to sample containers supplied by the analytical laboratory.
2. Label the set of first flush grab sample containers as follows: "Outfall No. 001, -Storm Water First Flush". Label the set of composite sample containers as follows: "Outfall No.001, - Storm Water Composite, Sample #1, #2#9".
3. At the onset of the storm event proceed to the sampling locations to commence sampling. Record the date and time of

the start of the storm event on a copy of the field log sheet provided in Attachment C. Record the rain gauge reading when the storm event began on the field log sheet and note any observations concerning weather or site conditions. Record the time when the discharge begins at the sampling location in column A of the field log for each location.

4. Within 30 minutes after the discharges begin at each sampling location, collect first flush sample at that location.

Procedures: Hold the sampler in the flow until it is filled. Fill and empty the sampler several times to wet the entire interior. Then fill the sampler and pour the contents into the sample container. Use as many samplers as is necessary to fill all of the first flush sample bottles.

Use a portable, temperature compensated, Ph meter to measure field Ph by immersing the clean probe in a full sampler. Discard the liquid from the sampler after recording Ph. Record Ph and time of sampling on field log sheet.

Complete labeling the sample bottles (date/time of collection, sampler's initials, etc.) Place containers in the sample cooler. Record any additional observations in field notebook or on the field log. Decontaminate the sampler with detergent wash and distilled water rinse. Any wash or rinse waters generated from these operations should be collected and disposed of in the sanitary sewer. Inspect the sampler, and if an oily residue is present, decontaminate the sampler as before, until it is clean.

5. Approximately 20 minutes from the start of discharge at the sampling location collect the first sample to be used in preparing the composite sample.

Procedures: Hold the previously decontaminated sampler in the flow until it is filled. Fill and empty the sampler several times to wet the entire interior. Then fill the sampler and pour the contents into the sample containers marked "Storm Water Composite - Sample #1". Place the filled sample bottles in the cooler. Mark the time the sample was collected on the field log sheet.

6. Repeat step 5 approximately every 20 minutes (three times an hour) for three hours filling bottles for Sample #2, Sample #3,Sample #9.

5.3 Sample Compositing Procedures

At the completion of the sampling program a table will be created to determine the volume to be used by the laboratory to prepare a time-weighted composite sample. The composite worksheet table is

provided in Attachment D to this plan. The instructions for completing the worksheet for each sampling location and specific procedures for completing these tasks are listed below, and summarized on the worksheet.

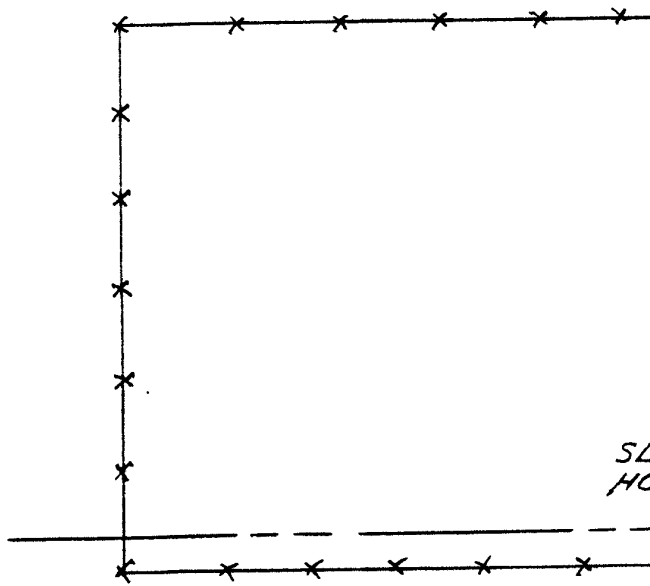
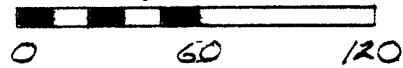
1. Transfer the start discharge time and the sample collection times from the field log to the composite sample worksheet for each sample, entering the values in the Sample Time column (Column A).
2. Subtract the previous sample time from each sample time to determine the elapsed time for that sample, and enter the value in the Elapsed Time column (Column B). The elapsed time for the first sample is determined by subtracting the time at which discharge started from the sample time.
3. Total the Elapsed Time column, (Column B), and put the sum at the bottom of column B.
4. Divide each sample elapsed time by the total elapsed time and place the value for each sample in the Proportion column, (Column C). To check for math errors, add the values in Column C. They should total approximately 1.0. The laboratory will use these proportion numbers to prepare the composite sample.
5. Column D will not be used for this sampling program.
6. Complete a Chain of Custody form for all samples. Place samples in cooler with cold packs and deliver to analytical laboratory (ASAP).
7. Upon arrival at the laboratory, transfer custody of samples (sign form) to person in sample receiving area. Advise the laboratory personnel to contact JWB Environmental Engineering (317-574-0350) if questions arise concerning parameters or other sample-related information.

ATTACHMENT A - SITE MAP



PROPERTY LINE

SCALE, FT



SL
HC

E MAP

HAVENS STREET

DESIGNED BY:

DRAWN BY *JWB*

REVISED

ANK MANUFACTURING
MO, INDIANA

VTAL ENGINEERING
PLACE, CARMEL, IN 46033

DRAWING NUMBER

1

ATTACHMENT B - SAMPLE CONTAINERS, PRESERVATIVES, & HOLDING TIMES

REQUIRED CONTAINERS, PRESERVATION TECHNIQUES, AND HOLDING TIMES

Parameter	Container(1)	Preservative(2), (3)	Maximum Holding Time (4)
Nitrate-nitrite	P, G	Cool, 4°C H ₂ SO ₄ to pH<2	28 days
Nitrite	P, G	Cool, 4°C	48 hours
O&G	G	Cool, 4°C H ₂ SO ₄ or HCl to pH<2	28 days
Organic carbon	P, G	Cool, 4°C HCl or H ₂ SO ₄ to pH<2	28 days
Orthophosphate	P, G	Filter immediately Cool, 4°C	48 hours
Oxygen, Dissolved Probe	G bottle and top	None required	Analyze immediately
Dissolved oxygen, Winkler method	G bottle and top	Fix on site and store in dark	8 hours
Phenols	G only	Cool, 4°C H ₂ SO ₄ to pH<2	28 days
Phosphorus (elemental)	G	Cool, 4°C	48 hours
Phosphorus, total	P, G	Cool, 4°C H ₂ SO ₄ to pH<2	28 days
Residue, total	P, G	Cool, 4°C	7 days
Residue, filterable	P, G	Cool, 4°C	7 days
Residue, nonfilterable (TSS)	P, G	Cool, 4°C	7 days
Residue, settleable	P, G	Cool, 4°C	48 hours
Residue, volatile	P, G	Cool, 4°C	7 days
Silica	P	Cool, 4°C	28 days
Specific conductance	P, G	Cool, 4°C	28 days
Sulfate	P, G	Cool, 4°C	28 days
Sulfide	P, G	Cool, 4°C, add zinc acetate plus sodium hydroxide to pH>9	7 days
Sulfite	P, G	None required	Analyze immediately
Surfactants	P, G	Cool, 4°C	48 hours
Temperature	P, G	None required	Analyze
Turbidity	P, G	Cool, 4°C	48 hours

REQUIRED CONTAINERS, PRESERVATION TECHNIQUES, AND HOLDING TIMES			
Parameter	Container(1)	Preservative(2),(3)	Maximum Holding Time (4)
Bacterial Tests			
Coliform, fecal and total	P, G	Cool, 4°C 0.008% Na ₂ S ₂ O ₃ (5)	6 hours
Fecal streptococci	P, G	Cool, 4°C 0.008% Na ₂ S ₂ O ₃ (5)	6 hours
Inorganic Tests			
Acidity	P, G	Cool, 4°C	14 days
Alkalinity	P, G	Cool, 4°C	14 days
Ammonia	P, G	Cool, 4°C H ₂ SO ₄ to pH<2	28 days
Biochemical oxygen demand	P, G	Cool, 4°C	48 hours
Biochemical oxygen demand, carbonaceous	P, G	Cool, 4°C	48 hours
Bromide	P, G	None required	28 days
Chemical oxygen demand	P, G	Cool, 4°C H ₂ SO ₄ to pH<2	28 days
Chloride	P, G	None required	28 days
Chlorine, total residual	P, G	None required	Analyze immediately
Color	P, G	Cool, 4°C	48 hours
Cyanide, total and amenable to chlorination	P, G	Cool, 4°C NaOH to pH>12 0.6g ascorbic acid (5)	14 days (6)
Fluoride	P	None required	28 days
Hardness	P, G	HNO ₃ to pH<2 H ₂ SO ₄ to pH<2	6 months
Hydrogen ion (pH)	P, G	None required	Analyze immediately
Kjeldahl and organic Nitrogen	P, G	Cool, 4°C H ₂ SO ₄ to pH<2	28 days
Metals (7)			
Chromium VI	P, G	Cool, 4°C	28 hours
Mercury	P, G	HNO ₃ to pH<2	28 hours
Metals, except above	P, G	HNO ₃ to pH<2	6 months
Nitrate	P, G	Cool, 4°C	48 hours

REQUIRED CONTAINERS, PRESERVATION TECHNIQUES, AND HOLDING TIMES			
Parameter	Container(1)	Preservative (2), (3)	Maximum Holding Time (4)
Organic Tests (8)			
Purgeable halocarbons	G, Teflon-lined septum	Cool, 4°C 0.008% $\text{Na}_2\text{S}_2\text{O}_3$ (5)	14 days
Purgeable aromatics	G, Teflon-lined septum	Cool, 4°C 0.008% $\text{Na}_2\text{S}_2\text{O}_3$ (5)	14 days
Acrolein and acrylonitrile	G, Teflon-lined septum	HCl to pH < 2 (9) Cool, 4°C 0.008% $\text{Na}_2\text{S}_2\text{O}_3$ (5)	14 days
Phenols (11)	G, Teflon-lined cap	Adjust pH to 4-5 (10) Cool, 4°C 0.008% $\text{Na}_2\text{S}_2\text{O}_3$ (5)	7 days until extraction, 40 days after extraction
Benzidines (11)	G, Teflon-lined cap	Cool, 4°C 0.008% $\text{Na}_2\text{S}_2\text{O}_3$ (5)	7 days until extraction (13)
Phthalate esters (11)	G, Teflon-lined cap	Cool, 4°C	7 days until extraction, 40 days after extraction
Nitrosamines (11), (14)	G, Teflon-lined cap	Cool, 4°C store in dark 0.008% $\text{Na}_2\text{S}_2\text{O}_3$	7 days until extraction, 40 days after extraction
PCBs (11) acrylonitrile	G, Teflon-lined cap	Cool, 4°C	7 days until extraction, 40 days after extraction
Nitroaromatics and isophorone (11)	G, Teflon-lined cap	Cool, 4°C store in dark 0.008% $\text{Na}_2\text{S}_2\text{O}_3$ (5)	7 days until extraction, 40 days after extraction
Polynuclear aromatic hydrocarbons (11)	G, Teflon-lined cap	Cool, 4°C store in dark 0.008% $\text{Na}_2\text{S}_2\text{O}_3$ (5)	7 days until extraction, 40 days after extraction
Haloethers (11)	G, Teflon-lined cap	Cool, 4°C 0.008% $\text{Na}_2\text{S}_2\text{O}_3$ (5)	7 days until extraction, 40 days after extraction
Chlorinated hydrocarbons (11)	G, Teflon-lined cap	Cool, 4°C	7 days until extraction, 40 days after extraction
TCDD (11)	G, Teflon-lined cap	Cool, 4°C 0.008% $\text{Na}_2\text{S}_2\text{O}_3$ (5)	7 days until extraction, 40 days after extraction
Pesticides Tests			
Pesticides (11)	G, Teflon-lined cap	Cool, 4°C pH 5-9 (15)	7 days until extraction, 40 days after extraction
Radiological Tests			
Alpha, beta, and radium	P, G	HNO_3 to pH < 2	6 months

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- (1) Polyethylene (P) or Glass (G).
- (2) Sample preservation should be performed immediately upon sample collection. For composite chemical samples each aliquot should be preserved at the time of collection. When use of an automated sampler makes it impossible to preserve each aliquot, then chemical samples may be preserved by maintaining at 4°C until compositing and sample splitting is completed.
- (3) When any sample is to be shipped by common carrier or sent through the United States Mails, it must comply with the Department of Transportation Hazardous Materials Regulations (49 CFR Part 172). The person offering such material for transportation is responsible for ensuring such compliance. For the preservation requirements of Table II, the Office of Hazardous Materials, Materials Transportation Bureau, Department of Transportation has determined that the Hazardous Materials Regulations do not apply to the following materials: Hydrochloric acid (HCl) in water solutions at concentrations of 0.04% by weight or less (pH about 1.96 or greater); Nitric acid (HNO₃) in water solutions at concentrations of 0.15% by weight or less (pH about 1.62 or greater); Sulfuric acid (H₂SO₄) in water solutions at concentrations of 0.35% by weight or less (pH about 1.15 or greater); and Sodium hydroxide (NaOH) in water solutions at concentrations of 0.080% by weight or less (pH about 12.30 or less).
- (4) Samples should be analyzed as soon as possible after collection. The times listed are the maximum times that samples may be held before analysis and still be considered valid. Samples may be held for longer periods only if the permittee, or monitoring laboratory, has data on file to show that the specific types of samples under study are stable for the longer time, and has received a variance from the Regional Administrator under § 136.3(e). Some samples may not be stable for the maximum time period given in the table. A permittee, or monitoring laboratory, is obligated to hold the sample for a shorter time if knowledge exists to show that this is necessary to maintain sample stability. See § 136.3(e) for details.
- (5) Should only be used in the presence of residual chlorine.
- (6) Maximum holding time is 24 hours when sulfide is present. Optionally all samples may be tested with lead acetate paper before pH adjustments in order to determine if sulfide is present. If sulfide is present, it can be removed by the addition of cadmium nitrate powder until a negative spot test is obtained. The sample is filtered and then NaOH is added to pH 12.
- (7) Samples should be filtered immediately on-site before adding preservative for dissolved metals.
- (8) Guidance applies to samples to be analyzed by GC, LC, or GC/MS for specific compounds.
- (9) Sample receiving no pH adjustment must be analyzed within seven days of sampling.
- (10) The pH adjustment is not required if acrolein will not be measured. Samples for acrolein receiving no pH adjustment must be analyzed within 3 days of sampling.

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- (11) When the extractable analytes of concern fall within a single chemical category, the specified preservative and maximum holding times should be observed for optimum safeguard of sample integrity. When the analytes of concern fall within two or more chemical categories, the sample may be preserved by cooling to 4°C, reducing residual chlorine with 0.008% sodium thiosulfate, storing in the dark, and adjusting the pH to 6-9; samples preserved in this manner may be held for seven days before extraction and for forty days after extraction. Exceptions to this optional preservation and holding time procedure are noted in footnote 5 (re the requirement for thiosulfate reduction of residual chlorine), and footnotes 12, 13 (re the analysis of benzidine).
- (12) If 1,2-diphenylhydrazine is likely to be present, adjust the pH of the sample to 4.0 ± 0.2 to prevent rearrangement to benzidine.
- (13) Extracts may be stored up to 7 days before analysis if storage is conducted under an inert (oxidant-free) atmosphere.
- (14) For the analysis of diphenylnitrosamine, add 0.008% $\text{Na}_2\text{S}_2\text{O}_3$ and adjust pH to 7-10 with NaOH within 24 hours of sampling.
- (15) The pH adjustment may be performed upon receipt at the laboratory and may be omitted if the samples are extracted within 72 hours of collection. For the analysis of aldrin, add 0.008% $\text{Na}_2\text{S}_2\text{O}_3$.

Source: 40 CFR 136.3 Table II

ATTACHMENT C - FIELD LOG SHEET

FIELD LOG FOR STORM WATER SAMPLING

Site Location _____ Date _____

Sampling Crew _____

Storm Data

Storm Start: Date _____ Time _____ Rain Guage _____ inches

Storm End: Date _____ Time _____ Rain Guage _____ inches

Storm Duration _____ Total Rain _____ inches

Sample Data

Sample No. Outfall No. _____ Outfall No. _____ Outfall No. _____

	Time	pH	Time	pH	Time	pH
StrtDis		-----		-----		-----
Grab						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

NOTES

ATTACHMENT D - COMPOSITE SAMPLE WORKSHEET

WORKSHEET FOR TIME-WEIGHTED COMPOSITE SAMPLES

Outfall Number _____

Sampling Date _____

	A	B	C	D
Sample No.	Sample Time	Elapsed Time	Proportion	Volume
Start Dis.		-----	-----	-----
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
Total	-----			

The following directions apply to each sample No.:

Column A- Time of day at which sample was collected or start of discharge, to the nearest minute.

Column B- Time elapsed since last sample was collected. For sample No. 1 this is the time since the start of discharge. For the remainder of the samples this is the time of day at which this sample was collected minus the time of day at which the previous sample was collected. Time elapsed should be to the nearest whole minute.

Column C- Proportion that this sample elapsed time is of the total elapsed time. The total elapsed time is the total of column B. This sample proportion is this sample elapsed time divided by the total of column B. The total for column C should add up to 1.0.

Column D- Volume of this sample in ml to be added to the composite sample to make 10,000 ml total of composite sample. This volume is calculated by multiplying the sample proportion by 10,000. The total for column D should add up to 10,000 ml.

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